TWO CORDLESS ACTIVATING CHARGERS ACTUATING ONE ANOTHER ABOUT VEHICLES AND PERFORMING THE ACTIVATION OF OTHER DEVICES ALSO

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part of application serial number **09/503,919**, filed on February **11, 2000**, now abandoned which is a continuation-in-part of application serial number **08/980,485** filed on November **28,1997** now abandoned and application serial number **08/390,484** filed on February **17, 1995**, now abandoned.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to energy and specifically to public utilities, vehicles, computers, televisions, refrigerators, electric ranges, air conditioners, motorized-wheelchairs, backup systems for the **Patent Office (PTO)** even Hospitals, homes, condominiums Banks and Generating Stations or Substations. The above **Cordless Activating Energy (CAE)**, however, can save thousands of dollars yearly in maintenance cost for **U.S.** organizations. While safety and environmental concerns each of which is an important issue, a **CAE Electric Powered Locomotive** will provide **CAE** concerning its load. On **earth**, only one nation will be generating **Giant CAE Systems**, namely, **THE UNITED STATES OF AMERICA**.

2. Description of the Prior Art

Two Cordless Actuating Battery Systems actuating one another, and performing the activation on other devices each of which is a revolutionary 21st. Century reality, such that **AMERICA** will not have to depend on foreign oil.

SUMMARY OF THE INVENTION

Accordingly, one object about this present invention is to provide dual cordless activating chargers for vehicles such as, Automobiles, Trucks, tractors, "Motorboats," ships, Aircrafts, Buses, Motorcycles, Scooters, Forklifts, Electric Jacks, Fire Fighting Apparatuses and Snow Removal Equipment.

Nevertheless, to accomplish the foregoing, and other objects, two cordless battery chargers actuating one another in a vehicle, other vehicles and performing the actuation in other devices comprises: dual conventional battery chargers, a first **2.5A** battery charger defining **96** percent efficiency, a second **2.5A** charger having the **96** percent efficiency also, an external power switch mounted about the first charger for placement of a user's finger, there actuated by depressing a surface of the power switch, thereby activating the chargers simultaneously, and defined on a column of the vehicle also, a buck-mode switching regulator **IC1** controlling the external power switch and the **IC1** having a charge pump for generating a positive gate-drive voltage of the power switch, a battery charging current having a voltage across a **25-Mohms** resistor **(R3)**, and is amplified by an op amp including positive-voltage feedback to the **IC1**, a chip for maintaining the charging current at **2.5A**, a circuit thereby, supplying the current to a separate load up to a limit set via a current-sense transformer **T1**, and a sense resistor **R1** for improving efficiency, thereby lowering power dissipation in the resistor **R1**, while charging. The transformer **T1** turns ratio **(1:70)** routes **1/70** via the total battery-plus-load current through the resistor **R1**. The transformer **T1** defining the feedback voltage to enable **IC1** to limit the overall current to a level compatible via the external components, which is a **100mV current-limit**.

According to another object regarding the invention, a pair of cordless battery operated actuating chargers activating one another in a vehicle, other vehicles, and thereby

performing the activation of many devices comprises: a first **DC** to **AC** converter for converting **DC** current via alternating current, a second **DC-AC** converter for converting the **DC** current to the alternating current, a first **AC** adaptor, thereby coupling the chargers to the converters, a second **AC** adaptor for joining the chargers to the converters when the chargers defining full charged energy: activating one another about a switch, a first battery cartridge for restoring life about a first battery, a second battery cartridge for restoring the life of a second battery, a six cell feeder for distributing restorable agents to the batteries. The vehicle has a motor mounted adjacent the chargers. The motor having a polarized plug. The chargers performing the activation via the motor, when the plug is connected through the first converter. The chargers performing the activation of the motor and starting the vehicle. The batteries are coupled to an alternator for its belt and pulley to spin **60 cps/60 Hz** via the motor. The chargers performing the activation of the motor, and thereby activating one another. The chargers thereby performing the activation of one another when the motor is turned off. The chargers actuate the other vehicles in the air, on the earth and in the water. The chargers performing the activation of the other devices in homes, condominiums, Hospitals, housing developments, Air Ports, offices, and Generating stations or Substations. The chargers actuating computers, televisions, electric ranges, air conditioners, and all portable devices, including refrigerators. The chargers activating a cordless escalator about Air Ports, and Train Stations. The chargers activate snow removal equipment, fire fighting equipment and motorized wheelchairs. The chargers, thereby performing the activation of satellites, and of systems for interception of missals. The chargers connected through series-parallel are equal to the sum of the power values consumed via each load. The cartridges have a **LED**, and resistors to thereby activate a first and second gear motor, the life is restored when the gear motors free the agents. The chargers activating backup systems for preventing the loss of data regarding computers.

BRIEF DESCRIPTION OF THE DRAWINGS

Further objects and advantages given herewith concerning the present invention will become apparent via the drawings, and the preferred embodiments concerning the description herein.

FIG. 1 is a view of two cordless activating chargers actuating one another, and activating other devices as well;

FIG. 2 is a block diagram simplifying the first **2.5A** cordless activating charger;

FIG. 3 is a block diagram simplifying the other **2.5A** cordless activating charger;

FIG. 4 is a perspective view of an electric vehicle, and a polarized plug connected to a first converter;

FIG. 5 is a cut surface of a first battery cartridge and its six cell feeder for distributing restorable agents;

FIG. 6 is a cut surface of a second cartridge having its six cell feeder for distributing restorable agents also;

FIGS. 7, 7F 7G, 7H have a block diagram via a light-actuated circuit, a **LED 0,** a load circuit and an alternator;

FIGS. 8-8G are views about an air conditioner and an electric range connected with the cordless actuating system;

FIG. 9 is a block diagram defining a **PWM** Controller;

FIGS. 10-10G define a view of a television connected with the charging system, and a block diagram via a Circuit;

FIG. 11 is a view of a computer comprising a printer each of which is connected to the cordless actuating system;

FIGS. 12-12G are block diagrams of a modal including its switch and the activating system.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to **FIG. 1,** dual conventional **2.5-A** battery chargers **H1** to **H2** charges one another, as two **LEDs Ra** and **Rb** emit light about the chargers **H1-H2.** The charger **H1** defines a battery **B1,** and the charger **H2** includes a battery **B2** about the **2.5 A** activating circuits **H1-H2** shown in **FIGS. 2-3.** The chargers **H1-H2** delvers **2.5 A** with efficiency, as high, as **96**

percent, since battery chargers are usually designed without regard for efficiency, seeing that the heat generated by low efficiency chargers will present a problem. A heat current-mode **P.W.M.** controller is a multi-input open-loop comparator that sums three signals: output voltage error signal via the reference voltage, current-sense signal, and slope compensation ramp **(FIG. 9)**. The **PWM** controller is a direct summing, thereby lacking a traditional error amplifier, and the phase shift associated with it. The direct summing configuration, however, approaches the ideal of cycle-by-cycle control over the output voltage.

Under heavy loads, this controller operates via full **PWM** mode. Thus, each pulse from an oscillator sets the main **PWM** latch, which turns on the high-side switch for a period, thereby, determined via the duty factor (approximately VOUT/ VIN). Since the high-switch turns off, a synchronous rectifier latch is now set. **60ns** later the low-side switch turns on, and stays on until the beginning of the next clock cycle (via continuous mode), or until the inductor current crosses zero (in discontinuous mode). Under fault conditions, where the inductor current thereby exceeds the **100mV** current-limit threshold, the high-side latch resets, whereby the high-side switch turns off. Since one charger **H1** can charge a battery of one to six cells, while operating from a vehicle battery, these chargers **H1-H2** can charge their batteries **B1-B2**, while operating from an electric vehicle and not exceed the **100mV**.

Further, the chargers **H1-H2** define a **DC-AC** converter **V1**, which has a plug **P1** to fit an output outlet **O1** about the charger **H1**. A **DC-AC** converter **V2** has a plug **P2** in an output outlet **O2** upon the charger **H2**. This system causes each **12 V** battery **B1** to **B2** to charge one another by a battery-charging current, which develops a voltage across a **25-Mohms** resistor **R3 (FIGS. 2-3)**. Now, an **AC** adapter **A1** fits a charger jack **1** by a mail plug **M1** upon the charger **H1**. As the adapter portion **A1** plugs in the converter **V2**, the charger **H2** now outputs current that chargers the battery **B1**. This is accomplished,

only when an AC adapter A2 fits a charger jack C by use of a plug M2 on the charger H2, since the adapter A2 plugs in the converter V1. As the charger H1 is charging the battery B2, the output outlet 01 upon the charger H1 outputs 12V DC current which the converter V1 converts to alternating current. The current flows through this adapter A2, its lead, and the plug M2 via the charger jack C. This charges the battery B2 whereby, the charger H2 is likewise charging battery B1.

Referring to FIGS. 12-12G, a power switch 7a is seen in FIG. PS for actuating a motor M of a vehicle. A controller 60 in the vehicle has a CPU 90 for activating the switch 7a, when two transistors Q3-Q4 are triggered. A coil of two relays Y and MR each of which is hot, as the transistors Q3-Q4 are triggered. Three coils 44,45,46 of actuators are for turning on the chargers H1 and H2, so that two resistors R6-R7 are provided, and the LEDs Ra-Rb emit light.

Since the switch 7a is coupled to the CPU 90, a user will actuate the switch 7a and at the self same time turn on the chargers H1-H2 simultaneously. Now, this will cause the motor M to be turned on, also, seeing that the transistor Q4 is for actuating the motor M. Besides, the transistor Q4 is engineered to turn on the motor M when the foundation of the transistors Q3-Q4 are, thereby, connected to the output terminals of the CPU 90. The collector of the transistor Q3 is connected to the hot coil of the relay Y, and to a collector bias source Vcc about the CPU 90. The emitter regarding the transistor Q3 is grounded as an end of these cols 44, and 45 of actuators for activating the charger H2 is connected to a lead of the collector bias source Vcc, the other end is thus grounded through the relay Y.

When the transistor Q3 is activated, the coil of the relay Y is hot, such that electric current flows through the coils 44-45, which turns on the charger H2 simultaneously as the switch 7a is activated. The collector of the transistor Q4 is connected to the coil of the relay MR, and to the collector bias source Vcc. The emitter of the transistor Q3 is

grounded and one lead of the coil **46** of actuator for causing the motor M to be turned on is coupled to the collector bias source **Vcc**, while the other leads are grounded using the relay **MR**. The **LEDs Ra-Rb** are connected via the collector bias source **Vcc**, and the other leads are grounded through the relay **MR**. Since the transistor **Q4** is turned on by a user, the coil via the relay **MR** is hot, so that electric current flows through the coil **46**, and the **LEDs Ra-Rb**. The motor M is now turned on, when the power switch **7a** is activated via a legal user, the switch **7a** turns off the motor M as it is activated once more by a legal user.

Referring to **FIGS. 2, 3,** and **4**, the activating system is located beneath a hood **H** of the vehicle. The charger **H1**, and its battery **B1** fit in a battery box **B**, as the charger **H2** and its battery **B2** fit a battery box **B3**. A Polarized plug **Z** concerning the motor M is plugged in the **DC-AC** converter **V1**. Besides, the embodiment about the **Cordless Activating System** is so that an alternator **XX** of the vehicle is conventionally coupled about the batteries **B1-B2 (FIG. 7H)**. An alternating voltage reverses its polarity on each alternation and reverses its direction of flow on each alternation. Nonetheless, the frequency via an **AC** voltage, or current is its number of cycles per second. For example, electricity being generated by public utility companies in the **United States** incorporate a frequency of **60** cycles per second. The motor **M** will cause an alternator belt including its pulley to rotate accordingly, regarding the above modification. The alternator **XX** can supply **AC** current to the batteries **B1-B2**, while the chargers **H1-H2** are charging one another. Besides, the chargers **H1-H2** are defined by the **PWM mode**. This prevents the chargers **H1-H2** from overheating when charging one another, and supplying **AC** current to a separate load, namely, the motor M. Now the user will not have to charge his/her vehicle, seeing that it is time consuming and annoying. Two large chargers defining two several hundred ton batteries concerning this system can operate accordingly, in Generating Stations for transmitting energy through transmission lines to varies parts of a City.

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Now, referring to **FIGS. 2-3**, The **MAX796/MAX797/MA799** Step-Down Controllers with respect to the present invention, have the Synchronous Rectifier for **CPU Power**, and defined by single or dual outputs in battery-powered systems. **IC1** is a buck-mode switching regulator of which controls the external power switch **7a** and the synchronous rectifier. Now the rectifier diode in coupled-inductor applications must withstand high flyback voltages better than **60V** that usually rules out most Schottky rectifiers. Common silicon rectifiers such as the **1N4001** are prohibited also, since they are far too slow. This causes fast silicon rectifiers, such as the **MURS120** the only choice.

Since **IC1** comprises a charge pump for generating the positive gate-drive voltage by way of **7a**, the battery-charging current develops a voltage across this **25-Mohms** resistor **(R3)** that is amplified by the op amp, and thereby presented, as positive-voltage feedback to **IC1**. This feedback thereby, enables this chip to maintain the charging current, thus, at **2.5A**. While charging, the circuit can, also, supply current to a separate load up to a limit set by current-sense transformer **T1**, and sense resistor **R1**. **T1** improves efficiency by lowering power dissipation in **R1**. This transformer **T1**, now, turns ratio **(1:70)** routes only **1/70** about the total battery-plus-load current about **R1**, thus creating a feedback voltage enabling **IC1** to limit the overall current however to a level compatible with the external components.

Buck-plus-flyback applications, are sometimes called "coupled-inductor" topologies, however need a transformer in order to generate multiple output voltages. The basic electrical design is a simple task via calculating turns ratios, and adding the power delivered to the secondary in order to, thus calculate the current-sense resistor and primary inductance. However, extremes of low input-output differentials, widely different output loading levels and high turns ratios can thus, complicate the design due to parasitic transformer parameters, such as inter-winding capacitance, and secondary

resistance. Power from the main and secondary outputs thus, is lumped together to obtain an equivalent current referred, however to the main output voltage. Set the value about the current-sense resistor at **80mV / TOTAL.**

PTOTAL = the sum regarding the output power from all outputs TOTAL = PTOTAL / V OUT = the equivalent output current referred to V OUT

$$L\ (\text{primary}) = \frac{V\ OUT\ (V\ N(MAX) - V\ OUT)}{V\ N(MAX) \times f \times TOTAL \times LIR}$$

$$\text{Turns Ratio } N = \frac{V\ SEC + V\ FWD}{V\ OUT(MIN) + V\ RECT + VSENSE}$$

where: V SEC is the minimum required rectified secondary-output voltage

V FWD is the forward drop across the secondary rectifier

V OUT(MIN) is the minimum value of the main output voltage

V RECT is the on-state voltage drop across the synchronous-rectifier **MOSFET**

V sense is the voltage drop across the sense resistor

In positive-output **(MAX796)** applications, the transformer secondary return is often referred to the main output voltage rather than to ground in order to thereby reduce the needed turns ratio. Now in this case, the main output voltage must first be subtracted from the secondary voltage thus to obtain V SEC.

As a rule, the basic **MAX.797** single-output 3.3V buck converter **(FIG. 10G)** is designed to accommodate a wide range of applications with inputs up to **28V.** While, each of these circuits is rated for a continuous load current at TA= **+85C,**

varies applications can withstand a continuous output short-circuit to ground. **Heavy-load** efficiency **MAX492/MAX494/MAX-495** can drive capacitive loads in excess of **1000pF**, however, under certain conditions **(FIG. 7G)**. When driving capacitive loads, the greatest potential for instability, thus, occurs, when the op amp is sourcing approximately 100uA. Even, with this system, stability is maintained with up to **400pF** output capacitance. Now, if the output sources either more or less current, stability is increased. These devices perform well with a **1000pF** pure capacitive load, nonetheless, to increase stability, while driving large capacitive loads with respect to **10,000pF** add an output isolation resistor.

Output loading and stability when driving heavy capacitive loads is another key advantage about comparable CMOS rail to rail op amps. Because the **MAX492/MAX494/MAX495** have excellent stability, no isolation resistor is required, only in the most demanding applications is it required. The **MAX-797** is a **BICMOS** switch-mode power-supply controller designed primarily for buck-topology regulators about battery-powered applications, where high efficiency and low quiescent supply current are critical. The **MAX797,** also, works well in other topologies such as boost, inverting and CLK due to the flexibility of its floating high-speed gate driver.

Moreover, the internal **IC PWM** Controller Blocks, and Bias Generator Blocks aren't powered, directly from the battery. Instead, a +5V linear regulator, thus, steps down the battery voltage to supply both the **IC** internal rail **(VLpin)**, as well as the gate drivers. As the synchronous-switch gate driver is directly powered from +5V VL, the high-side-switch gate driver is indirectly powered from VL with respect to an external diode-capacitor boost circuit. Notwithstanding, an automatic bootstrap circuit turns off the +5V linear regulator, and powers the **IC** from its output voltage if the output is above **4.5V.**

Referring to **FIGS. 5-6,** the chargers **H1-H2** have dual battery cartridges **98** to **99** for renewing battery life to the

batteries B1 and B2. As shown in FIG. 7, a light activating drive circuit Z1 controls a gear motor GM that is positioned in the cartridge 98. The circuit Z1 is also included in the cartridge 99 for activating another gear motor GM, which has a gear MG about a shift 38, and is actuated by a CMOS op amp IC1. Notwithstanding, the IC1 is used as a voltage comparator, which scans the levels of two input voltages, and turns its output on, or off based on, which input voltage is more. The input of pin 2 is fixed to a reference voltage of almost half the supply voltage by R3-R4, when the input on pin 3 is connected to a voltage divider R1, and one potentiometer R2. The resistance about a photocell changes, as the LED O emits light, the light intensity is thereby, indicatively shown by the voltage on pin 3 of IC1. The light level which turns on this circuit is set by R2. The output of pin 6 is turned on via R5, when the voltage about pin 3 of IC1 is more than pin 2. The output of IC1 drives a transistor Q1 so the transistor Q1 turns the gear motor GM on, and off by the op amp.

As this LED O starts the motor GM, the motor gear MG is rotated clockwise, such, as to rotate an Electrolyte gear EG, and a Sulphuric Acid gear AG counter clockwise. This is performed simultaneously since the gear MG is placed between both gears EG, and AG so that two cone shaped plugs 1M to 2M are rotated upward from two drain holes 39-40. The plugs 1M and 2M are secured, below two helixes 41-42. Two perforated blocks jj-kk having internal screw thread for receiving each helix 41-42. The gear EG is secured about the helix 41, and the gear AG is secured upon the helix 42. The cartridges 98 and 99 have two tubs, namely, EL and SA. The tubs EL and SA are divided by two walls 4Z-5Z. The wall 4Z includes a plug 6Z in its hole H6, and the wall 5Z defines a plug 7Z, in its hole H7, so that the plug 6Z is connected to the helix 41 by a wire W1, and the plug 7Z is connected to the helix 42 by a wire W2. As a result, when the LED O turns on the motor GM, as the gear MG is rotated clockwise, the plugs 6Z-7Z each of which is yanked from the holes H6-H7 by the wires W1-W2. As

the plugs 6Z-7Z are jerked by the wires W1-W2, the Sulphuric Acid, and the Electrolyte flows through the walls 4Z-5Z such that the Electrolyte can dissolve accordingly.

The nonmetallic electric conductor Electrolyte about which current is carried on an atom, as ion, or the movement of ions occupies the tub EL. Besides, this atom ion carries a positive, or negative electric charge which is a result of having lost or gained one or more electrons. Electrolyte is a substance so that when dissolved in Sulphuric Acid becomes a fused ionic conductor. Thus, this Sulphuric Acid occupies the tub labeled SA.

Now, both floor surfaces 49-50 define an acute angle so that the Electrolyte, and the Acid can drain smoothly via the drain holes 39-40, thus, into a six cell feeder F6. The six cell feeder having six internal seals for preventing the Electrolyte, and the Acid from draining in the batteries B1-B2 before being appropriately dissolved. When the Acid, and the Electrolyte are defined, as a fused ionic conductor, the six seals will breakdown such that the fused ionic conductor will penetrate each seal. Upon penetration, the six battery cells of B1-B2 are replenished, seeing six extended portions below the feeder F6 are shaped to conform to the contours of each cell. Now, this generates the voltage in the batteries B1-B2 to a fully charged voltage status about modification.

The batteries B1-B2 each of which is not as heavy as a lead storage cell, and has a longer life. These batteries B1-B2 requires less attention, and care, as they can be completely discharged and left uncharged for an indefinite time period. This abusive treatment would ruin a lead cell. Now when the internal resistance via the batteries B1-B2 each of which is defined by having very little resistance, and their life expectancies are near, the LED O can emit light about a dashboard (FIG. 7F). The cartridges 98-99 each of which can extend by cutouts 3B-3C of the chargers H1-H2. The lower end portions of the cartridges 98-99 will fit two cutouts 5C-6C, thus, in two battery charging housings H1-H2.